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动物分类学报

TWO NEW SPECIES OF THE GENUS SPHAEROPHORIA FROM CHINA (DIPTERA, SYRPHIDAE)

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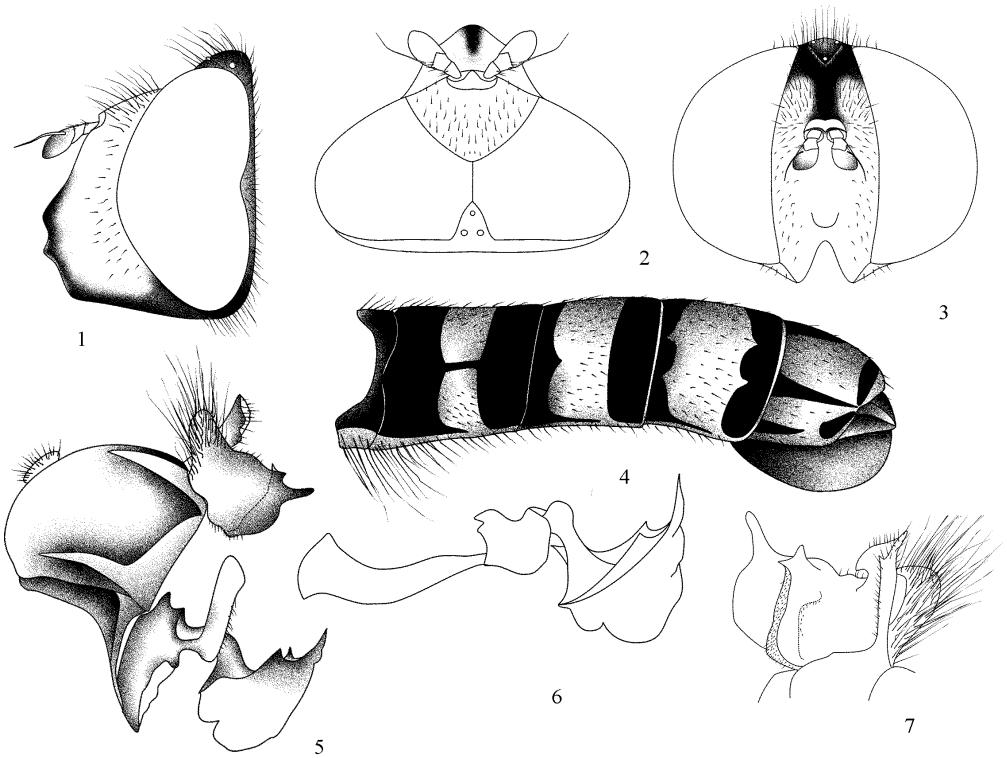
Abstract *Sphaerophoria melagena* sp. nov. and *Sphaerophoria chuanxiensis* sp. nov. are described from the west of Sichuan Province, China. Type specimens are deposited in the Museum of Animal and Botany, Shaanxi University of Technology.
Key words Diptera, Syrphidae, *Sphaerophoria*, Sichuan, new species.

Two new species, *Sphaerophoria melagena* sp. nov. and *Sphaerophoria chuanxiensis* sp. nov., are described from the west of Sichuan Province, China. Type specimens are deposited in the Museum of Animal and Botany, Shaanxi University of Technology, Hanzhong, China.

1 Sphaerophoria melagena **sp. nov.** (Figs. 1-7)

Male. Eyes bare, eye contiguity short, about half of frons in length. Vertex shiny black, black pilose, with ocelli collocated equilaterally. Occiput black, covered with yellow hairs and pollen. Frons shiny yellow and thinly yellow pilose. Face shiny yellow except black to brownish black on lower part of face beneath eyes and on facial tubercle, very sparsely yellow short pilose laterally. Face protruded forward at lower half, with facial tubercle narrow. Oral aperture black brown marginally. Gena black to black brown, covered with yellowish white pollen and yellow hairs. Antennae orange brown, with basal 2 segments black pilose dorsally, first flagellomere nearly oval, yellowish brown apically. Arista bare, brown.



Figs 1-7. *Sphaerophoria melagena* sp. nov. 1. Head, lateral view ♂. 2. Head, dorsal view ♂. 3. Head, frontal view ♀. 4. Abdomen, laterodorsal view ♂. 5. Genitalia, lateral view ♂. 6. Aedeagus, lateral view. 7. Superior lobe, inner view.

Mesonotum yellow pilose, shiny black tinged with bronze, with bright yellow lateral stripes extending to base of scutellum and a pair of grey median stripes to posterior part of scutum. Scutellum bright yellow but

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black at base laterally, entirely yellow pilose or intermixed sparsely black hairs posteriorly. Pleura shiny black but yellow on anepisternum posteriorly, katepisternum anteriorly and posteriorly, anepimeron posteriorly and katatergite. Upper and lower hairy patches of katepisternum broadly separated. Metasternum black, thinly yellow pilose. Legs yellow, with coxae, trochanters and extreme base of femora black, ventral base of femora of fore and middle legs black striped, tarsi dark brown but posterior tarsi black to black brown. Legs short black pilose but tibiae of fore leg yellow pilose and tibiae of middle leg intermixed with sparsely black hairs. Wing hyaline but pterostigma yellow brown, decorated with microtrichia.

Abdomen narrowly elongate, parallel-sided, with lateral margins curved ventrad. Abdominal tergite 1 black but yellow laterally, yellow pilose. Tergite 2 black, with yellow, narrowly separated medially band posteriorly, about 1/2 of tergite in length, tapered laterally and merged with yellow lateral margin, pile concolorous with the tergite. Tergites 3 and 4 black, each with narrow yellow posterior margins and a broad yellow band at the median portion, the latter of which tapered laterally and merged with yellow lateral margins. Yellow band on tergite 3 with concave medialb anterior margin and straight posterior margin. Yellow band on tergite 4 convex at anterior margin and nearly extended to anterior margin of tergite, concave medially, posterior margin straight with two prominent triangles beside the middle line. Pile on tergites 3 and 4 yellow but black on yellow bands medially. Tergite 5 orange yellow, with elongate black triangles at base laterally and anchor-shaped black spot posteriorly, middle of which tapered backwards from anterior margin of tergite. Tergite 6 yellow except a pair of black spots.

Male genitalia. Epandrium orange, semiglobose. Cerci small, light yellow, short whitish yellow pilose. Surstylus dull brown, short dull brown pilose, with posterodorsal margin sinuate. Posterodorsal lobe brownish yellow, bluntly rounded apically, long yellow pilose. Inner lobe protruded longways, acute apically, short brownish yellow pilose marginally. Anteroventral lobe with figure-like prominence at posterodorsal corner, on inner surface with vertical carina covered with short brown setae. Hypandrium narrowly ringed, small, dull brown. Superior lobe sheeted, elongate, narrowed basally and bent at right angle, short yellow pilose on posterior margin. In profile aedeagal base concave at middle dorsally and convex ventrally. Distal portion of aedeagus trifurcate apically, with irregular membranate vesicle posteriorly. Aedeagal apodeme brownish black, sheeted, broader basally.

Female. Vertex with black T-shaped spot extending to lunule; facial tubercle brown; oral aperture with narrowly black margin medially; gena black. Legs yellow, with tarsi tawny except dark posterior tarsi. Metasternum yellow. Abdomen narrowly oval, black, yellow bands narrow, of nearly equal width, with outer ends tapered and merged into yellow lateral margins of tergites. Yellow band on tergite 2 narrowly interrupted at middle, located at posterior part. Bands on tergites 3 and 4 located at anterior part. Tergite 5 with yellow spots laterally, tergite 6 yellow with three small black spots. Other characters are similar to male.

Body length: ♂7.5 mm, ♀7 mm; wing length: ♂6 mm, ♀5.5 mm.

Holotype ♂, 13 Aug. 2005, Luhuo, Sichuan, collected by SHI Fu-Min. Paratypes: 5 ♂♂, 3♀♀, same as holotype.

The new species is similar to *Sphaerophoria taeniata* (Meigen, 1822), but differs from the latter in following: eye contiguity shorter, about half of frons in length; facial tubercle, lower parts of face laterally and oral margin black to brownish black; metasternum black; coxae, trochanters and bases of femora black.

Etymology. The specific name is derived from the Hellenic words *mela-* (black) and *gena* (cheek), referring to black gena.

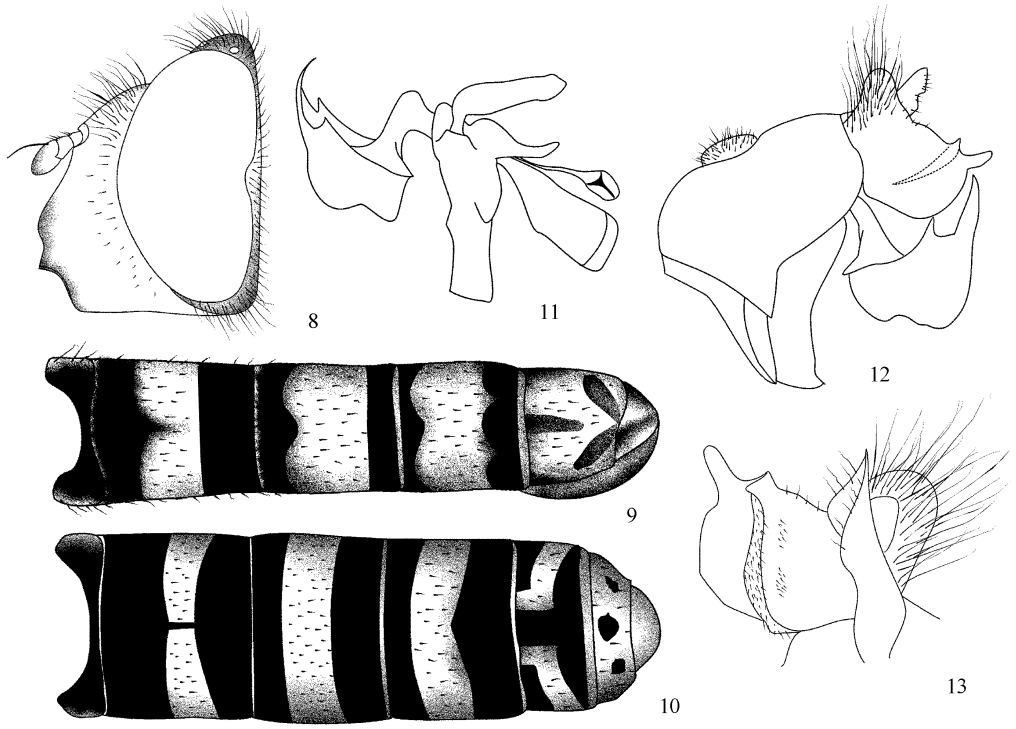
Discussion. The new species are of great variations among individuals. Yellow band on tergite 2 in some specimens of male not interrupted, facial tubercle brown, gena and lower part of face almost yellow laterally, coxae, trochanters and base of femora not black, but the main differences are metasternum of black, eye contiguity shorter. Yellow bands on tergite 2 in some specimens of female not interrupted, posterior margin of band on tergite 4 concave angularly at the middle.

2 Sphaerophoria chuanxiensis **sp. nov.** (Figs. 8-13)

Male. Eyes bare, with eye contiguity about half of frons in length. Vertex shiny black, with pile black, ocelli collocated isolaterally. Occiput black, pile and dense pruinosity yellow. Frons yellow, thinly yellow pilose. Face bright yellow, very sparsely yellow pilose laterally. Face projected forwards at lower half, with facial tubercle narrow, blackish brown, oral margin slightly blackish brown medially. Gena yellow, pruinosity yellowish white, pile yellow. Antennae orange yellow, with basal 2 segments black pilose dorsally, first flagellomere nearly oval, yellowish brown apically. Arista brownish black, bare.

Mesonotum yellow pilose, shiny, black with bronze reflections, with bright yellow lateral stripes extending to scutellum and a pair of gray vittae to posterior part of mesonotum. Scutellum brightly yellow, with pile yellow. Pleura shiny black, but yellow on following parts: posterior anepisternum, anterior and posterior katepisternum, anterior anepimeron, and katatergite. Upper and lower hairy patches broadly separated. Metasternum yellow, thinly yellow pilose. Legs yellow,

with tarsi brown but posterior tarsi black brown. Pile of legs shortly black, except fore tibia with yellow hairs and middle tibia intermixed with thinly yellow hairs. Wing nearly hyaline, covered with microtrichia, pterostigma yellow brown.



Figs 8-13. *Sphaerophoria chuanxiensis* sp. nov. 8. Head, lateral view ♂. 9. Abdomen dorsal view ♂. 10. Abdomen, dorsal view ♀. 11. Hypandrium and aedeagus, lateral view. 12. Genitalia, lateral view ♂. 13. Superior lobe, inner view.

Abdomen narrowly elongate, parallel-sided, with lateral margins curved ventrad. Tergite 1 black but yellow laterally, with long yellow hairs. Tergite 2 black, yellow band located at posterior part, about 1/2 of tergite in length, with outer ends tapered and merged into yellow lateral margin of tergite, pile concolorouse with ground. Tergites 3 and 4 with narrowly yellow margins apically, broad yellow bands medially, outer ends of which tapered and merged into yellow lateral margins of tergites. Yellow band on tergite 3 with arcuate anterior margin but concave medially, posterior margin straight. Yellow band on tergite 4 with arcuate anterior margin, nearly extending to anterior margin of tergite and concave medially, posterior margin slightly protruding laterally beside median line. Pile of tergites 3 and 4 of same color as tergite, except for black hairs on yellow bands medially. Tergite 5 orange yellow, with two small yellow spots at base laterally, and anchor-like black spot apically, black median stripe of which tapered backwards and extended to anterior margin of tergite. Tergite 6 entirely yellow except for two small black spots.

Male genitalia. Epandrium orange, semiglobose. Cerci small, light yellow, short whitish yellow pilose. Surstyli sinuate posteroventrally, short yellow pilose. Posterodorsal lobe bluntly rounded apically, long yellow pilose. Inner lobe protruded longways, acute apically, short brownish yellow pilose marginally. Anterior lobe with short figure-like prominence at posterodorsal corner, on inner surface with vertical carina clothed with short brown setae. Hypandrium narrowly ringed. Superior lobe sheeted, elongate, narrowed basally, bent at right angle, short yellow pilose on posterior margin. In profile aedeagal base concave at middle dorsally and convex ventrally. Distal portion of aedeagus trifurcate apically, with irregular membranate vesicle posteriorly. Aedeagal apodeme brownish black, sheeted, broader basally.

Female. Vertex with black T-shaped spot extending onto lunule. Facial tubercle brown. Oral aperture with narrowly black margin medially. Gena yellow. Legs yellow, with tarsi tawny except posterior tarsi darker. Metasternum yellow. Abdomen parallel-sided, black, yellow bands narrow, of nearly equal width, with outer ends tapered and merged into yellow lateral margins of tergites. Yellow band on tergite 2 located at posterior part, interrupted narrowly at middle. Yellow bands on tergites 3 and 4 located at anterior part. Tergite 5 with yellow spots laterally, tergite 6 yellow with three small black spots. Other characters are similar to male.

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The new species is similar to *Sphaerophoria melagena*

sp. nov. and *Sphaerophoria taeniata* (Meigen, 1822), but differs from the former in yellow metasternum, face at most with facial tubercle brown, gena yellow; and from the latter in junction of eyes of male shorter, about half of frons in length, body robust and large.

Etymology. The specific epithet is derived from the type locality, the west of Sichuan, China.

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中国细腹蚜蝇属二新种 (双翅目, 食蚜蝇科)*

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摘 要 记述采自四川川西地区的细腹蚜蝇属 2 新种: 暗颊细腹蚜蝇, 新种 *Sphaerophoria melagena* sp. nov. 和川西细腹蚜蝇, 新种 *Sphaerophoria chuanxiensis* sp. nov.。模式标本保存于陕西理工学院动植物标本馆。

1 暗颊细腹蚜蝇, 新种 Sphaerophoria melagena **sp. nov.** (图 1~7)

体长: ♂7.5 mm, ♀7 mm; 翅长: ♂6 mm, ♀5.5 mm。

正模 ♂, 2005-08-13, 四川炉霍卡萨湖, 海拔 3 540~3 870 m, 石福明采; 副模: 5 ♂♂, 3♀♀, 2006-08-13, 同正模。

新种近似连带细腹蚜蝇 *Sphaerophoria taeniata* (Meigen, 1822), 但新种面中突、颜面两侧下方及口缘黑至黑褐色; 雄性复眼接缝短, 约为额长的 1/2; 后胸腹板黑色, 各足基节、转节及腿节基部黑色, 雄性背针突前腹叶具指状突起。

词源: 新种以希腊词 *meda* (黑色的) 和 *gena* (颊) 组成新种名, 意为颊部黑色的。

讨论 本种个体有较大的变异。部分雄性个体第 2 背板横带不中断, 或面中突褐色, 颊部及颜面两侧下方黄色, 或足的基节、转节和腿节基部不呈黑色, 但具有的共同特征是后胸腹板黑色, 复眼接缝短。雌性部分个体第 2 背板黄带不中断, 第 4 背板黄带后缘中央角状凹入。

2 川西细腹蚜蝇, 新种 Sphaerophoria chuanxiensis **sp. nov.** (图 8~13)

体长: ♂7.5 mm, ♀7 mm; 翅长: ♂6 mm, ♀5.5 mm。

正模 ♂, 2005-08-13, 四川炉霍卡萨湖, 海拔 3 540~3 870 m, 石福明采; 副模: 5 ♂♂, 2♀♀, 2006-08-13, 同正模。

本种近似暗颊细腹蚜蝇和连带细腹蚜蝇 *Sphaerophoria taeniata* (Meigen, 1822), 但与前者的主要区别是后胸腹板黄色, 颜面至多中突褐色, 颊部黄色, 雄性背针突前腹叶指状突起较短; 与后者的区别是复眼接缝短, 约为额长的 1/2, 雄性背针突前腹叶具指状突起, 体较粗大。

关键词 双翅目, 食蚜蝇科, 细腹蚜蝇属, 四川, 新种.

中图分类号 Q969.44

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